

REMARKS/ARGUMENTS

In light of the following claim amendments and accompanying remarks, re-examination and reconsideration of this application, withdrawal of rejections, and formal notification of the allowability of all claims now presented are earnestly solicited. As detailed in the Office Action mailed March 7, 2007, Claims 1-19 and 21-31 are pending, wherein Claims 1-19 and 21-31 have been rejected. In response to the Office Action, Claims 1, 2, 8, 10, 11, 17-19, 25, 26, 28, 29, and 31 have been amended, and Claims 4, 13, 21, and 30 have been cancelled. The amendments find support throughout the Specification and Drawings, and no new matter has been added. Accordingly, it is believed that the claims now define patentable subject matter over the art cited in the Office Action, and a notice to such is requested at the Examiner's earliest convenience.

Claim Rejections - 35 USC§ 103

Claims 1-6, 8-15, 17-19, 21-23, and 25-31 were rejected in the Office Action as being obvious over U.S. Patent No. 5,966,218 to Bokelman et al. in view of U.S. Patent Application Publication No. 2004/0187560 to Cholet, and further in view of U.S. Patent Application Publication No. US 2004/0122547 to Seymour et al. In response, Claims 1, 10, 18, and 28 have been amended to clarify the subject matter being claimed, and Claims 2, 8, 11, 17, 19, 25, 26, 29, and 31 have been amended for consistency therewith.

More particularly, Claim 1 has been amended to recite an apparatus adapted to examine a length of a cigarette paper comprising a pattern including a first band and a second band, with the pattern repeating along the length of the cigarette paper. Such an apparatus comprises a second bobbin configured to be capable of receiving the cigarette paper and to have the cigarette paper advanced thereto and wound thereon after the cigarette paper is unwound from a first bobbin; a pattern detection device disposed between the first and second bobbins and configured to receive the cigarette paper unwound from the first bobbin, wherein the pattern detection device is configured to detect at least one of the bands and produce a band detection signal in response thereto; and a testing device in communication with the pattern detection device and

disposed serially therewith between the first and second bobbins, wherein the testing device is configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin.

Claim 10 has been amended to recite a system for examining a cigarette paper and manufacturing a cigarette therefrom. Such a system comprises a cigarette manufacturing device configured to manufacture the cigarette from a length of the cigarette paper, wherein the cigarette paper has a pattern including a first band and a second band, with the pattern repeating along the length of the cigarette paper. A cigarette paper testing apparatus is adapted to test one of the bands of the cigarette paper before the cigarette paper is used to manufacture the cigarette, wherein the cigarette paper testing apparatus comprises a second bobbin configured to be capable of receiving the cigarette paper and to have the cigarette paper advanced thereto and wound thereon after the cigarette paper is unwound from a first bobbin, with the second bobbin being configured to be received by the cigarette manufacturing apparatus so as to provide the cigarette paper thereto; a pattern detection device disposed between the first and second bobbins and configured to receive the cigarette paper unwound from the first bobbin, wherein the pattern detection device is configured to detect at least one of the bands and produce a band detection signal in response thereto; and a testing device in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, wherein the testing device is configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin.

Claim 18 has been amended to recite a method of examining a length of a cigarette paper having a pattern including a first band and a second band, with the pattern repeating along the length thereof. Such a method comprises detecting at least one of the bands with a pattern detection device disposed between the first and second bobbins as the cigarette paper is advanced to and wound on the second bobbin after being unwound from the first bobbin; producing a band

detection signal with the pattern detection device in response to the detection of the at least one of the bands; and nondestructively measuring at least one of a porosity and a basis weight of at least one of the bands with a testing device in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, in contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin.

Finally, Claim 28 has been amended to recite an apparatus adapted to examine a length of a cigarette paper having opposed ends and comprising a pattern including a first band and a second band, with the pattern repeating along the length thereof. Such an apparatus comprises a driven roller device configured to receive one of the ends and to advance the length of the cigarette paper in a machine direction; a tension device configured to operably engage the cigarette paper prior to the driven roller device, with respect to the machine direction, and to cooperate with the driven roller device so as to maintain a tension on the cigarette paper therebetween; a pattern detection device disposed between the driven roller device and the tension device, wherein the pattern detection device is configured to receive the cigarette paper, to detect at least one of the bands, and to produce a band detection signal in response thereto; and a testing device in communication with the pattern detection device and disposed serially therewith between the driven roller device and the tension device, wherein the testing device is configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the band detection signal.

In contrast, the Bokelman '218 patent discloses a bobbin optical inspection system that includes a rewinder machine configured to optically inspect banded paper unwound from a first bobbin by directing an elongated beam of light laterally across the paper. The elongated beam impinges on the surface of the paper and forms reflections. A line scan camera containing a linear CCD array receives the reflections and generates output signals that are processed by a line scan processor to generate data indicative of the spacing between bands, the width of the bands, and the contrast of the bands. After being inspected by the camera, the paper is rewound on a rewind bobbin.

The Cholet '560 reference discloses a permeability testing device for testing the

permeability of a cigarette paper, and explicitly states that the disclosed permeability testing device and testing method is particularly applicable to “cellulose type fibre weave which consists of a succession of transverse segments of different densities and therefore of different permeability” whereby “the porous segments of the strip are not visible, and so it is not possible to initialise the position of the strip by a visual reference” because “the successive segments P1 and P2 of the strip cannot be distinguished visually. As a consequence, **the only option** for positioning of the strips **is to measure, point by point**, . . . the permeability of the strip along the longitudinal axis . . .” As such, Cholet discloses a permeability testing device that first performs **a preliminary stage**, which comprises **a serial millimeter by millimeter permeability test along a paper to determine the periodicity of the bands** of different porosity levels. In this regard, the Cholet ‘560 reference notes that this is “**the only option for positioning of the strips**” (Paragraph [0025]). In the preliminary stage, a permeability profile is first determined, and a processor then determines a sinusoidal curve therefrom. The processor then determines the abscissa of the sinusoidal curve, from which an advancement of the strip is determined to provide the desired positioning for performing the permeability tests. That is, the determined periodicity is then used in **a measurement stage** by **the same permeability testing device** to perform the permeability tests along the paper. The permeability testing device disclosed by the Cholet ‘560 reference is thus used to run a first test to determine the periodicity of the bands of the paper, and then the same device is used to run a second test that uses the determined periodicity in order to perform the permeability tests along the paper.

The Seymour ‘547 reference discloses a cigarette manufacturing system/process whereby a band detection system generates a signal that affects other components of the system in the manufacturing process, such as a flying knife.

In this regard, the Applicants submit that Claims 1, 10, 18, and 28, as amended, particularly recite a pattern detection device disposed between the first and second bobbins and configured to detect at least one of the bands and produce **a band detection signal** in response thereto. A testing device in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, is configured to **nondestructively measure at least one of a porosity and a basis weight** of at least one of the bands **in**

contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin. That is, the Applicants particularly note that Claims 1, 10, 18, and 28 now recite **particular and specific configurations of a cigarette paper inspection device/system and associated method**, in which all of the recited limitations are important aspects of the subject matter being claimed. The Applicants therefore object to the assertions in the Office Action of the “means” disclosed by each of the cited references as the basis for obviousness rejection set forth therein.

While the Applicants are fully aware of the recitations of *In re McLaughlin*, *In re Fine*, and *In re Jones* recited in the Office Action, the Applicants further submit that “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” MPEP §2143.01, “Fact That References Can Be Combined Or Modified Is Not Sufficient To Establish Prima Facie Obviousness,” citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis added). In addition, “[t]he level of skill in the art cannot be relied upon to provide the suggestion to combine references.” MPEP §2143.01, “The Prior Art Must Suggest the Desirability of the Claimed Invention,” citing *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (emphasis added). Furthermore, “[a] statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references.” MPEP §2143.01, “Fact That the Claimed Invention is Within the Capabilities of One of Ordinary Skill in the Art is Not Sufficient by Itself to Establish *Prima Facie* Obviousness,” citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000); and *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999). In reference to the assertions in the Office Action of the “means” disclosed by each of the cited references as the basis for obviousness rejection set forth therein, the Applicants believe that the

allegation of obviousness formed in such a manner essentially comprises an evaluation directed to a “gist” or “thrust” of the claimed invention, instead of particularly considering the combination of elements, as a whole. In this regard, MPEP §2141.02(II) notes that “[d]istilling an invention down to the “gist” or “thrust” of an invention disregards the requirement of analyzing the subject matter “as a whole.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).”

In this regard, the Bokelman ‘218 patent discloses only an optical inspection system for inspecting the paper, whereby a line scan camera containing a linear CCD array receives reflections from the paper and generates output signals that are processed by a line scan processor to generate data indicative of the spacing between bands, the width of the bands, and the contrast of the bands, but does not teach or suggest that any of the inspection stations generates a band detection signal upon inspection of the paper, wherein that band detection signal is used to contemporaneously trigger a testing device to measure at least one of a porosity and a basis weight of a band of the cigarette paper. That is, even if the device disclosed by the Bokelman ‘218 patent could be considered a “pattern detection device,” the device merely outputs data indicative of the spacing, width, and contrast of bands, and does not generate a “band detection signal” for affecting any “testing device.” Further, the citing of the Seymour ‘547 reference for the prospect of using “band detection devices to send signals to control other related processes,” as “equivalent means for determining the location of the bands” ignores the fact that the Seymour ‘547 reference particularly implements a band detection system in the context of a cigarette manufacturing process, which is not relevant to a testing device in a system directed to the examination of a cigarette paper used in the manufacture of a cigarette, as particularly claimed in the pending claims, as amended.

Further, the Cholet ‘560 reference discloses a permeability testing device that first performs a preliminary stage, which comprises a serial millimeter by millimeter permeability test along a paper to determine the periodicity of the bands of different porosity levels, as “the only option for positioning of the strips” (Paragraph [0025]), wherein the determined periodicity is then used in a measurement stage by the same permeability testing device to perform the permeability tests along the paper. That is, the permeability testing

device disclosed by the Cholet '560 reference is thus used to run a first test to determine the periodicity of the bands of the paper, and then the same device is used to run a second test that uses the determined periodicity in order to perform the permeability tests along the paper. As such, even if the permeability testing device of Cholet could be considered a "pattern detection device" as well as a "testing device," the Cholet '560 reference does not teach or suggest implementing a separate and discrete pattern recognition device for locating the bands and generating a band detection signal, whereby a separate and discrete testing device (wherein a pattern recognition device and a testing device are particularly claimed as two separate elements in each of the subject independent Claims 1, 10, 18, and 28) contemporaneously responds via the band detection signal generated by the pattern recognition device. Thus, the permeability determination along the paper by the "testing device" of Cholet does not occur in contemporaneous response to a band detection signal communicated thereto by a pattern recognition device upon detection of a band, as particularly recited in the amended claims.

Thus, the Applicants submit that the cited references alleged by the Office Action to obviate the pending claims collectively disclose:

- A) an optical inspection system for inspecting the paper which generate data indicative of the spacing between bands, the width of the bands, and the contrast of the bands, but does not teach or suggest that any of the inspection stations generates a band detection signal upon inspection of the paper, wherein that band detection signal is used to contemporaneously trigger a testing device (Bokelman);
- B) "equivalent means for determining the location of the bands" vis-à-vis a band detection system in the context of a cigarette manufacturing process, which is not relevant to a testing device in a system directed to the examination of a cigarette paper used in the manufacture of a cigarette, and does not teach or suggest any "testing device" for the cigarette paper (Seymour);
- C) a permeability testing device used to run a first test to determine the periodicity of the bands of a paper, wherein the same device is then subsequently used to run a second test that uses the determined periodicity in order to perform permeability tests along the paper, and wherein the same permeability testing device is alleged to be both a "band

detection device" and a "testing device" (Cholet).

As such, the Applicants submit that the combination of the cited Bokelman, Seymour, and Cholet references in the Office Action to arrive at the alleged obviousness rejection appears to be "[a] statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art." In this regard, MPEP §2143.01 particularly notes that this "is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references." Furthermore, the Applicants submit that the recitations of the teachings of the Bokelman, Seymour, and Cholet references in terms of "means," as recited in the Office Action, is evaluating a "gist" or "thrust" of the claimed invention, which disregards the requirement of analyzing the subject matter "as a whole." MPEP §2141.02(II).

The Applicants thus submit that the Bokelman '218 patent does not disclose any band detection signal generated by a pattern detection device for contemporaneously triggering a testing device to perform a porosity and/or basis weight measurement of a band of a banded cigarette paper. Further, the Cholet '560 reference does not teach or suggest implementing separate and discrete testing and pattern recognition devices, or a testing device configured to contemporaneously respond to a band detection signal generated by a pattern recognition device. In addition, the Seymour '547 reference does not disclose any "testing device" or any applicability of a band detection system to a testing device in a cigarette paper examination process. In this regard, the Applicants reiterate that the pattern detection device and the testing device recited by Claims 1, 10, 18, and 28 are individual elements that are serially disposed such that the bands of the cigarette paper are detected by the pattern detection device, which generates a band detection signal, and the porosity and/or basis weight of a band is measured by the testing device in contemporaneous response to the band detection signal communicated thereto by the pattern detection device, as the paper is advanced through those serially disposed elements. As such, the Applicants submit that the Bokelman '218,

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Cholet '560, and Seymour '547 references, either separately or in combination, **do not** teach or suggest the embodiments of the present invention as now claimed in Claims 1, 10, 18, and 28. Claims 1, 10, 18, and 28 now pending are therefore patentable over the Bokelman '218, Cholet '560, and Seymour '547 references, in addition to Claims 2, 3, 5-9, 11, 12, 14-17, 19, 22-27, 29, and 31 which depend therefrom, and the Applicants request withdrawal of these rejections.

CONCLUSION

In summary, the Bokelman '218, Cholet '560, Seymour '547, and George '245 references, either separately or in combination, **do not** teach or suggest the embodiments of the present invention as now recited in independent Claims 1, 10, 18, and 28. Accordingly, in view of the differences between the Applicants' invention and the Bokelman '218, Cholet '560, Seymour '547, and George '245 references, it is submitted that the embodiments of the present invention as defined by Claims 1-3, 5-12, 14-19, 22-29, and 31 now pending are patentable over the prior art cited in the Office Action. As such, Claims 1-3, 5-12, 14-19, 22-29, and 31 are believed to be in condition for immediate allowance, and notice to such effect is requested at the Examiner's earliest opportunity.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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